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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,414	10/17/2003	Mitsuhiko Miyazaki	62649-00003	2208
7590	08/30/2004		EXAMINER	
Sung I. Oh, Esq. Squire, Sanders & Dempsey, L.L.P. 14th Floor 801 S. Figueroa Street Los Angeles, CA 90017			JEFFERY, JOHN A	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 08/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/688,414

Applicant(s)

MIYAZAKI, MITSUHIKO

Examiner

John A. Jeffery

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20040426</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawing Objections

The drawings are objected to because of the following informalities:

Figs. 9-10B: The figures must each be labeled "PRIOR ART".

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Disclosure Objections

The disclosure is objected to because of the following informalities:

The specification is replete with grammatical and idiomatic errors too numerous to mention specifically. The specification should be revised carefully. Examples of such errors are: In Para. 0008, "periods" must be changed to "period" and "lever" must be changed to "level." In Para. 0053, "hat" must be changed to "heat."

Appropriate correction is required.

Claim Rejections - 35 U.S.C. § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12-17 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. The test for definiteness under 35 U.S.C. § 112, second paragraph is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986).

Claim 12: In line 10, "the heating" must be changed to "the heat generating member" for clarity.

Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this action:

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A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, 12, and 18-20 are rejected under 35 USC 102(b) as being anticipated by GB1289816. GB1289816 discloses a handheld electrically-heated soldering iron comprising electric heater 13 and temperature sensor 14. The temperature sensor is separated longitudinally from the electric heater (i.e., "located distant" from the heater) by space "S." See Fig. 1 and P. 1, lines 38-42 and 84-94. By spacing the temperature sensor away from the heater and closer to the tip, the sensor more accurately detects the tip temperature and is less affected by the heater.

Claims 18-20 are construed as a means-plus-function claim under 35 U.S.C. § 112, sixth paragraph since (1) the term "means for" is used; (2) a function is included; and (3) the limitation is not modified by sufficient structure, material, or acts in support thereof. Accordingly, the examiner construes the limitations to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. See *In re Donaldson Co.*, 29 USPQ2d 1845 (Fed. Cir. 1994).

Regarding claim 18, the temperature sensor 14 or 19 and means for conducting power through the second end to energize the electric heater disclosed in GB1289816 is equivalent to the means for sensing temperature disclosed in the instant specification. Regarding claims 19 and 20, the temperature sensor 14 or 19 of GB1289816 is equivalent to the means for minimizing drop in temperature near the first end during successive operations disclosed in the instant specification.

Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB1289816 in view of GB1507033. The claims differ from the previously cited prior art in calling for the heater to comprise a heater coil wound around a heat conductive core. But such electric heaters in heated tools are well known in the art as evidenced, for example, by GB1507033 noting heating coil 10. Such an arrangement facilitates removal of the tip for repair or replacement and more uniformly heats the tip. In view of GB1507033, it would have been obvious to one of ordinary skill in the art to provide a wound electric heater on a heat conductive core in the previously described apparatus to facilitate removal of the tip for repair or replacement and more uniformly heat the tip.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over GB1289816 in view of EP1086772. The claim differs from the previously cited prior art in calling for the tip to be made of copper or silver as a main component. However, copper soldering iron tip are well known in the art as evidenced by EP1086772 noting col. 5, lines 18-20. As is well known in the art, copper is as a tip material in view of its excellent heat conductivity. In view of EP1086772, it would have been obvious to one of ordinary skill in the art to use copper as a tip material in the previously described apparatus in view of the material's excellent heat conductivity thus more efficiently conducting heat from the heater to the workpiece.

Claims 3, 4, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB1289816 in view of Schoenwald (US 3,654,427). The claims

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differ from the previously cited prior art in calling for heater and sensor lead wires to each have an exposed portion outside the body. But exposing sensor and heater lead portions in an electrically heated soldering iron is conventional and well known in the art as evidenced by Schoenwald (US 3,654,427) noting Fig. 2 where electric heater lead portions 51 and 56 and temperature sensor lead portions 60 and 66 are exposed outside the body. Such an arrangement enables repeatable electrical connections to both the heater and the sensor via a plug. See col. 4, line 43 - col. 5, line 2. In view of Schoenwald (US 3,654,427), it would have been obvious to one of ordinary skill in the art to provide exposed heater and sensor lead portions in the previously described apparatus to enable repeatable electrical connections to both the heater and the sensor via a plug.

Claims 5, 6, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB1289816 in view of Schoenwald (US 3,654,427) and further in view of Markum et al (US 4,182,948). The claims differ from the previously cited prior art in calling for a surface of the exposed portion of the heater or sensor lead wire to be treated and nickel-plated. But providing nickel-plated terminals to reduce contact resistance is conventional and well known in the art as evidenced by Markum et al (US 4,182,948) noting col. 1, lines 64-66 where terminal 12 for an electric heater is plated with nickel to improve electrical conductivity (i.e., reduce contact resistance). In view of Markum et al (US 4,182,948), it would have been obvious to one of ordinary skill in the

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art to plate the exposed leads of the previously described apparatus with nickel to improve electrical conductivity (i.e., reduce contact resistance).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over GB1289816 in view of Herzon (US 6,235,027). The claim differs from the previously cited prior art in calling for incorporating the electric heating device in a tweezer-type handheld device. Electrically-heated tweezers, however, are well known in the art as evidenced by Herzon (US 6,235,027) noting electric heaters 18 located adjacent the tips of each tweezer leg. See Fig. 5. Such an instrument facilitates heating the workpiece while grasping it. In view of Herzon (US 6,235,027), and further noting that both GB1289816 and Herzon (US 6,235,027) are in the same field of endeavor (electrically-heated handheld tools), it would have been obvious to one of ordinary skill in the art to incorporate the electric heating device of GB1289816 in tweezers to heat the workpiece while grasping it.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB1289816 in view of Herzon (US 6,235,027) and further in view of Idsund (US 5,002,323). The claims differ from the previously cited prior art in calling for the included angle to be between 10 and 14 degrees when the legs are closed. But tweezers having such an included angle when closed to enhance gripping of small workpieces is well known in the art as evidenced, for example, by Idsund (US 5,002,323) noting included angle V4 that is between 10 and 15 degrees when closed.

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See Fig. 3 and col. 5, lines 8-12. In view of Idsund (US 5,002,323), it would have been obvious to one of ordinary skill in the art to provide an included angle between 10 and 14 degrees in the previously described apparatus to enhance gripping of small workpieces.

Other Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant should (1) separately consider the art, and (2) consider the art together with the previously cited prior art for potential applicability under 35 U.S.C. §§ 102 or 103 when responding to this action. US 973, US 923, US 178, US 692 disclose heated devices with temperature sensors distant from the electric heater for more accurate temperature detection. US 021, US 320, DE 255, US 258 disclose tweezers relevant to the instant invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. Jeffery whose telephone number is (703) 306-4601. The examiner can normally be reached on Monday - Thursday from 7:00 AM to 4:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans, can be reached on (703) 305-5766. All faxes should be sent to the centralized fax number at (703) 872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)

A handwritten signature in black ink, appearing to read "John A. Jeffery", with a stylized, flowing script.

**JOHN A. JEFFERY
PRIMARY EXAMINER**

8/27/04